SANTA CRUZ BIOTECHNOLOGY, INC.

ACP1 (h): 293T Lysate: sc-111661

BACKGROUND

Regulation of intracellular concentrations of flavoenzymes and flavin coenzymes is essential for proper cell homeostasis. Red cell acid phosphatase, known as ACP1, catalyzes the transfer of phosphate from phosphate ester substrates to suitable acceptor alcohols such as methanol and glycerol. ACP is a genetically polymorphic, cytoplasmic low-molecular-weight flavin mononucleotide phosphatase that regulates the intracellular concentrations of flavin coenzymes. The human ACP1 gene maps to chromosome 2p25.3 and encodes a pair of isozymes, Bf (α) and Bs (β) The ACP1 α and β isozymes are not glycosylated. Both ACP1-α and ACP1-β isozymes are 157 amino acids in length; however the two forms differ in sequence over an internal 34 residue segment. The two isoforms are believed to differ in substrate specificity.

REFERENCES

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2. Dissing, J. and Sensabaugh, G.F. 1987. Human red cell acid phosphatase (ACP1): evidence for differences in the primary structure of the two isozymes encoded by the ACP1*B allele. Biochem. Genet. 25: 919-927.
3. Dissing, J., Johnsen, A.H. and Sensabaugh, G.F. 1991. Human red cell acid phosphatase (ACP1). The amino acid sequence of the two isozymes Bf and Bs encoded by the ACP1*B allele. J. Biol. Chem. 266: 20619-20625.
4. Wo, Y.Y., McCormack, A.L., Shabanowitz, J., Hunt, D.F., Davis, J.P., Mitchell, G.L. and Van Etten, R.L. 1992. Sequencing, cloning, and expression of human red cell-type acid phosphatase, a cytoplasmic phosphotyrosyl protein phosphatase. J. Biol. Chem. 267: 10856-10865.
5. Dissing, J. and Johnsen, A.H. 1992. Human red cell acid phosphatase (ACP1): the primary structure of the two pairs of isozymes encoded by the ACP1*A and ACP1*C alleles. Biochim. Biophys. Acta 1121: 261-268.
6. Lazaruk, K.D., Dissing, J. and Sensabaugh, G.F. 1993. Exon structure at the human ACP1 locus supports alternative splicing model for f and s isozyme generation. Biochem. Biophys. Res. Commun. 196: 440-446.
7. Bryson, G.L., Massa, H., Trask, B.J. and Van Etten, R.L. 1995. Gene structure, sequence, and chromosomal localization of the human red cell-type low-molecular-weight acid phosphotyrosyl phosphatase gene, ACP1. Genomics 30: 133-140.
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CHROMOSOMAL LOCATION

Genetic locus: ACP1 (human) mapping to 2p25.3.

PRODUCT

ACP1 (h): 293T Lysate represents a lysate of human ACP1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

ACP1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive ACP1 antibodies. Recommended use: 10-20 µl per lane.

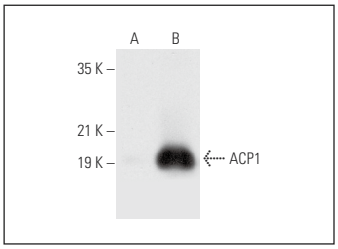
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ACP1α (G-9): sc-398377 is recommended as a positive control antibody for Western Blot analysis of enhanced human ACP1 expression in ACP1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

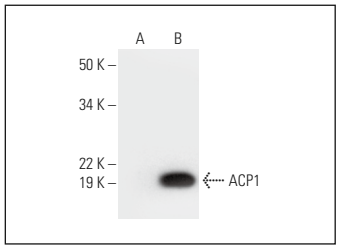
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



ACP1α (G-9): sc-398377. Western blot analysis of ACP1 expression in non-transfected: sc-117752 (**A**) and human ACP1 transfected: sc-111661 (**B**) 293T whole cell lysates.



ACP1α (A-2): sc-393280. Western blot analysis of ACP1 expression in non-transfected: sc-117752 (**A**) and human ACP1 transfected: sc-111661 (**B**) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.